



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1750
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,087	11/27/2001	Paul Michael Dantzig	YOR920010320US1	9571

7590 12/27/2005
Gail H. Zarick
Intellectual Property Law Dept.
IBM Corporation
P.O. Box 218
Yorktown Heights, NY 10598

EXAMINER

NAWAZ, ASAD M

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/995,087

Applicant(s)

DANTZIG ET AL.

Examiner

Asad M. Nawaz

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the amendment filed on May 4th, 2005. Claims 1-42 were directed to a load balancing algorithm wherein the load on the primary server is compared with a threshold. Claims 1-42 have been amended and are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 10-17, 20-29, and 31-42 are rejected under 35 U.S.C. 103(a) as being anticipated by Swildens et al (US Patent No 6,694,358) hereinafter referred to as Swildens further in view of Peterson (US Patent No 6,788,648) further in view of Nepustil (US Patent No 6,240,454).

As to claim 1, Swildens teaches a method, in a network comprising a primary server and at least one offload server, for dynamic offloading of processing requests from said primary server to said at least one offload server, the method comprising the steps of:

Art Unit: 2155

determining a load on said primary server; (Abstract; Figs 3; Cols 1 and 2, lines 64-67 and 1-17)

serving processing requests at said primary server and if the load on said primary server exceeds said first threshold, offloading at least a portion of said processing requests to said at least one offload server. (col 3, lines 26-38; col 9, lines 1-13)

However, Swildens does not explicitly indicate if the load on said primary server is less than or exceeds a first threshold.

Peterson teaches a method, in a network determining a load on said primary server and if the load on said primary server is less than a first threshold, serving processing requests at said primary server; and if the load on said primary server exceeds said first threshold, then offloading at least a portion of said processing requests to said at least one offload server.(col 3, lines 18-31)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Peterson into those of Swildens to make the system more efficient. Allowing the load balancing techniques in Swildens to also compare with a predetermined threshold would allow the administrator to take preventive steps in protecting a complete system failure. Furthermore, both pieces of art are from the same field of endeavor.

However Swildens and Peterson do not explicitly indicate offloading only if the load on the primary server exceeds the first threshold. Nepustil teaches offloading once the load on the primary server becomes excessive.(col 2, lines 20-46)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Nepustil into those of Swildens and Peterson in order to make the system more efficient. Only one server out of the entire server set serves an individual portion of the information at anyone time which allows for efficient caching of the information. (Nepustil col 2, lines 5-19)

Claims 11, 21, 22, 23, 32, 41, and 42 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 2, Swildens teaches the method of claim 1 wherein said load comprises bandwidth utilization and said first threshold is a network bandwidth utilization of said primary server. Col 4, lines 1-4; col 5, lines 1-6 and 34-40; col 8, lines 18-48)

Claims 12, 24 and 33 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 3, Swildens teaches the method of claim 1 wherein the said load comprises CPU utilization and said first threshold is a CPU utilization of said primary server. (col 5, lines 10-15; col 8, lines 18-48)

Claims 13, 25, and 34 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 4, Swildens teaches the method of claim 1 wherein serving the processing requests at said primary server includes returning a page to a user wherein all the embedded objects in the page have links to said primary server; and offloading at least a portion of the processing requests to at least one offload server includes serving a base page at said primary server in which the links for embedded objects point to said offload server. (col 3, lines 19-23 and 39-56; col 9, lines 43-64)

Claims 14, 26, and 35 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 5, Swildens teaches the method of claim 1 wherein offloading at least a portion of the processing requests to said at least one offload server includes routing an incoming Web request to a selected offload server. (col 3, lines 26-38; col 9, lines 1-13)

Claims 15, 27, and 36 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 6, Swildens teaches the method of claim 1 and further including the step of, if the processing load on said primary server exceeds a second threshold, throttling at least one processing request. (col 9, lines 25-30; col 12, lines 3-36)

Claims 16, 28, and 37 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 7, Swildens teaches the method of claim 6 wherein throttling at least one processing request includes returning a page to a user indicating that a server is overloaded. (col 9, lines 25-30; col 12, lines 3-36)

Claims 17, 29, and 38 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

As to claim 10, Swildens teaches the method of claim 1 wherein the determination of which of said at least one offload server that at least one processing request is to be offloaded to is based on one or more of a group including a client identity, a client gateway (IP) address, a price of the offload service, or a current or previous load on the at least one offload server. (col 3, lines 26-38; col 8, lines 36-48; col 9, lines 1-13; col 10, lines 59-67)

Claims 20, 31, and 40 are essentially the method, program product, and system for the claim above. They further contain similar limitations as the claim above and thus are rejected under similar rationale.

4. Claims 8-9, 18-19, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swildens and Peterson and Nepustil further in view of Gupta et al (US Patent No 6,374,305).

Art Unit: 2155

As to claim 8, Swildens teaches the method of claim 6 but does not explicitly indicate dropping at least one processing request without returning any information to a user.

Gupta et al teaches requests being dropped if they reach a certain threshold without returning any additional information.(col 3, lines 9-20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Gupta into those of Swildens to make the system more efficient. By dropping requests that exceed previously set thresholds, the system no longer wastes server/processing time or other network resources in sending a message.

As to claim 9, Swildens teaches the method of claim 6 wherein throttling at least one processing request includes returning a page to a user indicating that a server is overloaded if said load exceeds said second threshold but does not explicitly indicate dropping said at least one processing request if said load exceeds a threshold.

Gupta et al teaches requests being dropped if they reach a certain threshold without returning any additional information.(col 3, lines 9-20)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Gupta into those of Swildens to make the system more efficient. By dropping requests that exceed previously set thresholds, the system no longer wastes server/processing time or other network resources in sending a message.

5. Pertinent art not relied upon:

- Sitaramann et al: US Patent No 6,442,165 discloses a load balancing technique in which each request is assigned a ticket based upon performance ratings to operable instances.
- Goldszmidt et al: US Patent No: 6,195,680 discloses detection of load imbalances and/or failures and dynamically switching to a secondary server. The server is chosen based upon numerous metrics including falling below or exceeding some threshold value.

Response to Arguments

6. Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2155

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asad M. Nawaz whose telephone number is (571) 272-3988. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AMN



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER